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Renewable Energy on Federal Lands

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Mr. Chairman and members of the Committee, thank you for this opportunity to discuss renewable energy production on National Forest System lands.

I understand this hearing is one of a series the committee is holding regarding implementation of the Energy Policy Act of 2005, Public Law 109-58. Renewable energy development plays a significant role in the agency's implementation of the Energy Policy Act of 2005 (EPAcT 2005). As you know, that law significantly benefits consumers by increasing energy supplies while protecting the environment and fostering greater competition in the marketplace. The Act also improves the Nation's energy security and reduces our dependence on foreign sources of oil by increasing the use and diversity of renewable energy sources and by reducing energy consumption through greater conservation and energy efficiency.

First, a quick synopsis of what we've done under the EPAcT 2005 to date. To meet the provisions of titles II and III of the Act, we have completed three Memorandums of Understanding (MOUs). One, under section 365, improves energy permit coordination on Federal lands and which assigns agency personnel to pilot project offices. The second, with the Bureau of Land Management (BLM) for timely processing of pending geothermal lease requests under section 225 was completed in April 2006. The third with the BLM under 363 improves oil and gas leasing and permitting procedures between the BLM and Forest Service. We also worked cooperatively with BLM to revise the Oil and Gas Onshore Order No. 1 regulation on the approval of oil and gas onshore lease operations.

In addition, we have processed 254 special use authorizations (97 percent) within established timeframes for electric transmission lines, oil or gas pipelines, and renewable energy generation facilities. We, along with other Federal agencies developed and

published an interagency rule making for expedited trial-type hearings for applicants or other parties contesting conditions for hydropower facilities. We have begun implementing section 368, which calls for designating energy corridors on Federal lands. This effort included public scoping meetings in 11 Western states. The public comment period started with the publication of the preliminary draft corridor map (June 9, 2006) and ran until July 10, 2006.

I will now discuss each renewable energy source separately.

Geothermal Energy

Nearly 50 percent of the nation's geothermal energy production comes from Federal lands. There are currently 354 Federal geothermal leases, 116 on NFS lands. At the present time, there are 5 producing leases on NFS lands contributing to a 12 mega-watt power plant and a 45 mega-watt power plant. Generally, one megawatt provides enough electricity for about 1,000 homes.

A joint report prepared by the Department of Energy's (DOE) National Renewable Energy Laboratory and the Department of the Interior (DOI) describes the potential for geothermal development on public lands in the 7 states that have geothermal resources. The report is entitled **Opportunities for Near-Term Geothermal Development on Public Lands in the United States**. While no specific geothermal resource assessment analysis has been completed to date addressing NFS lands, the report provides a synopsis of geothermal activity and site specific facts related to this activity for NFS lands by State.

The BLM and the Forest Service coordinate geothermal resource leasing activities on NFS lands. The Forest Service provides the consent to lease and the BLM issues the leases. The Forest Service serves as lead agency for geothermal leasing availability analyses and decisions and conducts analysis on geothermal activities on NFS lands. Also, we develop lease stipulations for NFS lands that are only as restrictive as necessary to protect the resources for which they are applied. The Forest Service and the BLM coordinate the signing and release of decision documents in leasing of NFS lands. Despite the environmental benefits of geothermal energy, there have been barriers to development of these resources on NFS lands. The study conducted jointly by the DOE and DOI concluded there is a need to streamline environmental reviews. The EPAct 2005 addresses this and other issues. The Act calls for streamlining the permitting process, changes the royalty structure to provide payments to local governments, and directs the U.S. Geological Survey to update the assessment of geothermal resources made during 1978 and submit this updated assessment to Congress. It also provides a production tax credit. These changes have spurred increased interest in developing geothermal resources.

The Forest Service concurrence is pending on 65 lease applications in Oregon, Washington, California, Arizona, Nevada, and Idaho. Issues to be addressed include requirements associated with threatened and endangered species and the need to amend land management plans that do not presently address geothermal development. Under

section 225 of the EPAct 2005, the Forest Service has signed an MOU with BLM that provides administrative procedures for processing geothermal lease applications, establishes a program to reduce the backlog of lease applications by 90 percent within five years, and provides for a joint data retrieval system for tracking lease and permit applications.

Woody Biomass

Biomass has surpassed hydropower as the largest domestic source of renewable energy. A recent joint U.S. Forest Service – Department of Energy report, **Biomass as Feedstock for a Bioenergy and Bioproducts Industry: The Technical Feasibility of a Billion-Ton Annual Supply**, commonly known as the “Billion Ton Report,” projects that there are over 1.3 billion dry tons per year of biomass potential – enough to produce biofuels sufficient to meet more than one-third of the nation’s current demand for transportation fuels by 2030. About one-quarter of that total, roughly 400 million dry tons of biomass could be produced in a sustainable manner from all forest and rangelands - including private, state, tribal and federal lands.

Woody biomass is woody materials removed from National Forest System, other Federal, State and private lands as a byproduct of forest management activities. Woody biomass includes tree stems, limbs, tops, needles, leaves and other woody parts. Currently most of this material is underutilized, commercial value is low, markets are small to non-existent and the infrastructure needed to process this material is insufficient or nonexistent in many parts of the country.

The Administration’s Healthy Forests Initiative has significant potential to increase the availability of woody biomass from Federal lands. As the committee is aware, the Forest Service and the Department of the Interior last year treated hazardous fuels on more than 2.9 million acres of land, and reduced hazardous fuels on an additional 1.4 million acres through other land management actions. Roughly one-quarter of the acres treated resulted in biomass utilization for forest products, bio-based or bio-energy purposes, but the potential exists for substantial expansion of biomass use. Federal agencies plan to treat 2.9 million more acres in 2006, and accomplish hazardous fuels reduction on an additional 1.6 million acres through landscape restoration activities, with an additional 4.6 million acres planned for 2007, which includes 3 million acres of hazardous fuels treatments and 1.6 million acres through landscape restoration activities.

To put this material to productive use requires an integrated strategy involving federal, state, tribal and private forest owners along with communities and other private interests. The public benefits of diverting this material from other disposal options such as open burning or expensive landfilling, and the positive environmental consequences of a clean and renewable energy source are just beginning to be articulated and valued in the market through renewable energy credits, carbon credits and pollution credits.

Local areas and regions of the country have unique opportunities and challenges related to biomass utilization. Hurricane damage in the South, fuels treatments needs around

communities, and insect outbreaks all provide cross-ownership woody biomass utilization challenges.

The Forest Service is also increasing our Research and Development efforts at the Forest Products Laboratory and at our Research Stations to provide renewable energy and alternatives to fossil fuels from woody biomass. This effort includes improved in-woods operations, transportation and handling, processing and new bio-based products.

The restoration of our nation's forest to be more resilient to natural disturbance, such as catastrophic wildfires is a primary objective for a significant portion of our timber sale program. These restoration efforts are dramatically affected by biomass utilization and the global timber market.

Therefore, biomass utilization is critical to our ability to meet our restoration needs. The FY 2007 President's Budget addresses this need by dedicating \$610 million to implementing the Healthy Forest Initiative. This includes \$5 million to foster markets in biomass utilization. Additionally, the President's Healthy Forests Initiative, the Healthy Forests Restoration Act, and stewardship contracting, allow the Forest Service to work more effectively and efficiently with the local community in treating hazardous fuels, and to promote investment in the local timber infrastructure.

In summary, the Forest Service's biomass energy activities are aimed at providing a predictable and sustainable supply, improving utilization through technical assistance and science, and developing partnerships across woody biomass interests.

Wind and Solar Energy

In 2005, the Forest Service and the Department of Energy's National Renewable Energy Laboratory established a partnership to conduct an assessment of renewable energy resources on National Forest System lands in the continental United States, including administrative and physical limitations on access to them. One goal of the resulting report was to identify those National Forest and Grassland units that have the highest potential for private-sector development of wind, concentrating solar power and photovoltaic energy resources.

Using geographic information system (GIS) data, the interagency team developed screening criteria for each of the solar and wind resources to produce maps of the 25 NFS sites with the highest potential for development of each energy source. Sites had to be relatively flat and not near urban areas and were excluded if they were not accessible to appropriate transmission capacity or a major road. Inventoried Roadless Areas and other Specially Designated Areas were also excluded. The assessment found that 99 NFS Units have high potential for power production from solar or wind sources and 20 have high potential for power production from two or more wind or solar sources.

Energy facilities qualify as one of the potential uses of National Forest System lands. (Mining and Minerals Policy Act and Forest Service Manual 2802). The Forest Service processes proposals for solar and wind energy facilities using existing Special Uses

regulations and policies. Proposals to use National Forest System Lands are submitted to the District Ranger or Forest Supervisor having jurisdiction over the affected lands. The authorized officer then initiates pre-application actions that involve initial and second-level screening which are followed by a formal application in the event that a proposal meets the screening criteria.

The processing of recent wind energy proposals on the Green Mountain National Forest in Vermont and on the Huron-Manistee National Forest in Michigan has revealed that policy needs to be developed related to wind energy projects due to the unique factors, such as the impact on migratory birds, associated with this energy resource.

In response, Joel Holtrop, Deputy Chief for the National Forest System, announced the creation of an ad hoc Wind Energy Guidance Team on February 24, 2006. The team is developing policy to addressing the factors associated with wind energy facilities on National Forest System lands.

The primary goal of the team is to provide local Forest Service officials with the information and tools necessary to efficiently process proposals for wind energy facilities. A specific wind energy policy will ensure that local officials can make well-informed decisions and will ensure that adequate and consistent analyses and procedures are implemented to assess and evaluate proposals.

The team will determine whether any special considerations should be made when screening wind energy proposals, the type and term of authorizations, and the methodology for calculating the fees associated with the authorization. The team is also considering guidance for potential visual, scenery, recreation, or wildlife impacts and measures to mitigate those impacts.

The recent BLM Programmatic Environmental Impact Statement on Wind Energy Development is being used as a resource to allow for interagency consistency in policy. The ad hoc team has directly consulted with BLM employees concerning certain text and procedures of the BLM Programmatic Environmental Impact Statement (PEIS). The Forest Service intends to adopt many of the best management practices provided in the PEIS. In those instances where the Forest Service's legal authority, management practices and procedures do not allow us to completely align with the BLM, we are developing direction that is better suited to our agency's particular needs.

Our guidance also differs from the BLM due to continuing advances in wind energy technology, as well as new information on its affects on wildlife and civilian and military radar. Our direction will address these emerging issues to ensure it is based on the available best science. The Forest Service expects to publish the wind energy policy and handbook direction in the Federal Register this fall. The policy will call for the evaluation of wind energy proposals to be done at the Forest level using public comment processes due to the differing landscapes, habitats, wildlife populations, and public concerns unique to each site.

To date, the Forest Service has received no applications to construct a concentrating solar power or photovoltaic project.

In conclusion, Mr. Chairman, the Forest Service is firmly committed to the development of renewable energy sources on National Forest System lands. These lands are already one of the nation's larger sources of hydropower and geothermal energy. The agency will play a leading role in increasing the utilization of woody biomass as a renewable energy source. We are confident we can accomplish all of this within the statutory and regulatory framework under which the Forest Service manages 193 million acres of forests and grasslands.

I would be glad to answer any questions you may have.